Calcareous Prairie

Rarity Rank: S1/G1
Synonyms: Barrens, Calcareous Barrens, Calcareous Clay Prairie, Keiffer Prairie, Jackson Prairie, Blackland Prairie, Calcareous Glade
Ecological Systems: CES203.379 West Gulf Coastal Plain Southern Calcareous Prairie

***General Description*:**

- Small, naturally treeless areas ranging in size from less than one acre, up to 80 or more acres
- Occur in a mosaic with calcareous forests
- Occurs on calcareous substrata associated with four geological formations:
    - Fleming Formation (Tertiary-Miocene) in central-western LA
    - Jackson Formation (Tertiary-Eocene) in central LA
    - Cook Mountain Formation (Tertiary-Eocene) in central and western LA
    - Pleistocene Red River terraces in northwest LA (morse clay prairies)
- Soils are stiff calcareous clays (surface pH ~ 7.5-8.0), with very high shrink-swell characteristics, and range in color from red to olive-tan to gray-black
- Various soil inclusions occur (depending on geology) and may include calcareous concretions (limestone nodules), marine mollusc shells, shark teeth, and gypsum crystals
- Regularly-occurring fire, high soil pH, and extreme physical soil properties are believed to generate and perpetuate these upland clay prairies
- Herbaceous flora is very diverse and dominated by grasses, composites, and legumes

Plant Community Associates

Common grass species include:

Schizachyrium scoparium (little bluestem),
Andropogon gerardii (big bluestem),
Aristida spp. (three-awn grasses),
Panicum spp. (panic grasses),
Setaria spp. (bristle grasses)
Sporobolus spp. (dropseeds),
Sorghastrum nutans (Indian grass),
Paspalum spp. (paspy grasses),
Eragrostis spp. (love grasses),

Common composite species include:

Eurybia spp. & *Symphyotrichum* spp. (asters),
Liatris spp. (blazing-stars),
Solidago spp. (goldenrods),
Vernonia spp. (ironweeds),
Eupatorium spp. (thoroughworts),
Echinacea purpurea (purple coneflower, rare),
Cacalia plantaginea (Indian plantain),
Helenium spp. (sneeze-weeds),
Coreopsis spp. (tick-seeds),
Ambrosia psilostachya (western ragweed),
Rudbeckia spp. (brown-eyed susans),
Echinacea pallida (pale coneflower),
Silphium spp. (rosin-weeds),
Gaillardia aestivalis (blanket flower)

Common legumes and forb(wildflower) species include:

Acacia angustissima (prairie acacia),
Baptisia spp. (indigos),
Desmanthus illinoensis (wad o'pods),
Galactia volubilis (milk pea),
Mimosa strigillosa (sensitive-briar),
Neptunia lutea (yellow puff),
Petalostemum candidum (white prairie clover),
P. purpureum (purple prairie clover),
Anemone berlandieri (wind flower),
Ranunculus spp. (crow-foot),
Asclepias spp. (milk-weeds),
Callirhoe papaver (poppy-mallow),
Delphinium carolinianum (larkspur),
Hedyotis nigricans (bluets),
H. purpurea var. *calycosa* (prairie bluets, rare),
Linum spp. (flax),
Oenothera speciosa (Mexican evening-primrose),
Ruellia humilis (wild petunia),
Salvia azurea (blue sage)

Common woody species (invade prairies in absence of fire) include:

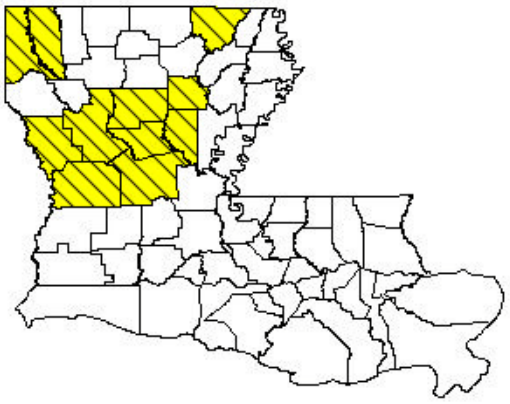
Crataegus spp. (hawthorns),
Bumelia lanuginosa (chittumwood),
Berchemia scandens (rattan-vine),
Diospyros virginiana (persimmon),
Cornus drummondii (rough-leaf dogwood),
Juniperus virginiana (eastern red cedar),
Ilex decidua (deciduous holly),
Smilax bona-nox (greenbriar),
Fraxinus americana (white ash),
Gleditsia triacanthos (honeylocust)

Federally-listed plant & animal species:

None

Range:

Upper and Lower West Gulf Coastal Plain ecoregions, primarily in central and west-central Louisiana with limited area remaining in northwest LA, and historically known from the Mississippi River Alluvial Plain ecoregion in northeast LA.



Threats & Management Considerations:

Historically there was an estimated 2,000 to 10,000 acres of calcareous prairie statewide but only five to 10 percent of the original extent is thought to remain today. As with the associated calcareous forests, calcareous prairies have mainly been lost to land use changes. Conversion to agriculture or pine plantations and fire suppression represent the greatest loss, while construction of roads, pipelines and utilities, invasive and exotic species, physical damage from timber harvesting, contamination by chemicals (herbicides, fertilizers), and off-road vehicle use all threaten remaining calcareous prairies.

Use of appropriate management activities and developing a compatible management plan prevents destruction or degradation of this habitat type and promotes long-term maintenance of healthy calcareous prairies. Such management strategies should include:

- Use of periodic prescribed fire (every 3 to 5 years)
- Monitoring for and removal of any invasive or exotic species by spot herbicide treatments or mechanical means

- Preventing use of prairie openings as logging sets
- Prohibiting off-road vehicle use or restricting use to existing trails